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TITLE : HIGH ALLOY STAINLESS STEEL FOR CHIMNEY, FLUE AND DESULFURIZING EQUIPMENT HAVING EXCELLENT CORROSION RESISTANCE

ABSTRACT : PURPOSE: To obtain the subject stainless steel having excellent corrosion resistance (general corrosion resistance and crevice corrosion resistance) by the minimum addition of alloy elements by regulating its compositional critical value.

CONSTITUTION: An alloy contg., by weight, 0.004 to 0.05% C, $\leq 5\%$ Si, $\leq 2\%$ Mn, 18 to 25% Cr, 14 to 24% Ni, 1 to 4.5% Mo, 0.5 to 2.0% Cu, $\leq 0.05\%$ Al and 0.01 to 0.3% N, contg. $\leq 0.03\%$ P, $\leq 100\text{ppm}$ S and $\leq 50\text{ppm}$ O and the balance substantial iron with inevitable impurities is refined. At this time, the above steel is furthermore regulated so that general corrosion resisting index (GI value) and crevice corrosion resisting index (CI value) under the environment of a chimney, a flue and desulfurizing equipment simultaneously satisfy the below conditions; where $\text{GI value} = -\text{Cr} + 3.6\text{Ni} + 4.7\text{Mo} + 11.5\text{Cu}$ is regulated to $60 \leq \text{GI} \leq 90$ and $\text{CI value} = \text{Cr} + 0.4\text{Ni} + 2.7\text{Mo} + \text{Cu} + 18.7\text{N}$ is regulated to $35 \leq \text{CI} \leq 50$.

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